



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,353	06/30/2003	Daxiong Ji	967AAC	8180
7590	11/24/2004		EXAMINER TAN, VIBOL	
Kevin Redmond 6960 SW Gator Trail Palm City, FL 34990			ART UNIT 2819	PAPER NUMBER

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/609,353

Applicant(s)

JI, DAXIONG

Examiner

Vibol Tan

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 16-22 is/are allowed.
6) ☒ Claim(s) 1-3, 5-7, 9, 10 and 12-15 is/are rejected.
7) ☒ Claim(s) 4, 8 and 11 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 6, 7, 10, 12, 13, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Brooks et al. (U. S. PAT. 6,329,890).

In claims 1, 3, and 6 Brooks et al. teaches all claimed features in Fig. 12, a power splitter comprising: a substrate having a plurality of dielectric layers (70-80); a capacitor (88) formed between two of the layers (78, 80); a first inductor (85) formed by a first circuit line formed on at least one of the layers (72); a second inductor (86) formed by a second circuit line formed on at least one of the layers (72); a plurality of terminals (ball gate array) located on an outer surface of the substrate (bottom of 82) and a plurality of

Art Unit: 2819

conductive vias (14, 89, 90) extending between the layers for providing an electrical connection between the capacitor, the first and second inductor and the terminals; wherein the circuit lines have a sinuous shape (85, 86); wherein the capacitor (88) further comprises, a first plate located on a first dielectric filter layer (74) and a second plate formed on a second dielectric layer (76).

Claims 7, 10, 12, 13, and 15 correspond to detailed circuitry already discussed similarly with regard to claims 1, 3, and 6.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks et al. in view of Ralph (U. S. PAT. 6,819,202).

In claim 2, Brooks et al. teaches all claimed features, the power splitter of claim 1; with the exception of teaching wherein the substrate is formed from layers of low temperature co-fired ceramic (LTCC). However, Ralph teaches a power splitter that includes a low temperature co-fired ceramic in col. 1, line 53.

Therefore; it would have been obvious to one ordinary skill in the art at the time of the invention was made to employ LTCC taught by Ralph into the power splitter device of Brooks et al. in order to provide a new power splitter that takes up less space and has improved electrical repeatability.

Claim 9 corresponds to detailed circuitry already discussed similarly with regard to claim 2.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks et al. in view of the prior art of Fig. 1.

In claim 5, Brooks et al. teaches all claimed features, the power splitter of claim 1; with the exception of teaching wherein an external resistor is connected between two of the terminals. However, the prior art of Fig. 1 shows resistor 30 connected between Ports 1 and 2.

Therefore; it would have been obvious to one ordinary skill in the art at the time of the invention was made to connect an external resistor between the output terminals/ports, in order to improve isolation between the output ports.

Claim 14 corresponds to detailed circuitry already discussed similarly with regard to claim 5.

7. Claims 4, 8, and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 16-22 appear to comprise allowable subject matters.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vibol Tan whose telephone number is (571) 272-1811. The examiner can normally be reached on Monday-Friday (7:00 AM-4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike J. Tokar can be reached on (571) 272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vibol Tan

Primary Examiner, AU 2819



VIBOL TAN
PRIMARY EXAMINER